

## REMARKS

Claims 1-7 are pending. Claims 1 and 3 have been amended. Claims 8-11 have been added. No new matter has been added by way of this amendment. Reconsideration of this application, in light of the present amendment and remarks, is respectfully requested.

Claims 1 and 6 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,790,836 to *Brecher*, while claims 3-6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Brecher* in view of U.S. Patent No. 6,166,285 to *Schulte et al.* Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Brecher* in view of U.S. Patent No. 6,160,200 to *Ehrnsperfer et al.* These several rejections are respectfully traversed.

U.S. Patent No. 4,790,836 to *Brecher* discloses a disposable diaper that comprises five layers, as follows: (i) a thin, continuous homogeneous water-soluble film on the side of the diaper for coming into direct contact with an infant's skin; (ii) a medicated powder layer; (iii) a liquid-permeable film; (iv) an absorbent core; and (v) a liquid-impermeable film. According to this reference, the absorbent core and the liquid-impermeable film may be conventional materials that are commonly used in disposable diapers, and the liquid-permeable film may be a fabric, e.g. a non-woven fabric, or a plastic sheet, such as polyethylene formed with liquid-permeable openings, as also used in some types of diapers.

Set forth on page 2, paragraph 4 of the Office Action is the statement that:

“Brecher discloses the use of a disposable diaper with a topsheet (6), backsheet (10), a core (8) located there between, a layer containing a skin

protective ingredient such as a medicated powder (4), and a water soluble film (2) located on top of the powder (See figure 1). Brecher discloses the film layer is dissolved as soon as the infant wets the diaper (column 2, lines 27-30). Therefore the solubility of the film would be promoted at the temperature of the urine it comes in contact to, which is approximately 37 degrees Celsius when leaving the body.”

With respect to this statement, Applicant respectfully asserts that the medicated powder in *Brecher* serves to promote the medication and drying of an infant’s skin. With respect to this reference, it can be appreciated that when the infant wets her diaper, her skin also becomes wet. As a result, her wet skin is dried and simultaneously medicated by the medicated powder. Medication provided at this time is similar to the typical application of a medicated powder subsequent to the removal of a diaper. In contrast to this, the skin-protective ingredient of the invention, as set forth in amended claim 1 and newly added independent claims 8, 9, and 10, forms an oily film on the wearer’s skin for preventing the wearer’s skin from coming into direct contact with urine. Hence, it follows that the function of the skin-protective ingredient in the invention as claimed is different from the function of the medicated powder disclosed in *Brecher*.

Furthermore, *Brecher* requires an homogenous water-soluble film that is dissolved as soon as an infant wets her diaper. This implies that water solubility of the water-soluble film is an unconditional event. Namely, it is mandatory that the water-soluble film in *Brecher* is dissolved as it becomes wet. In contrast, the claimed invention requires (i) a predetermined temperature and (ii) a predetermined humidity for liquification to occur (i.e., conditional events) to then expose the skin-protective ingredient containing layer and thereby come into contact with the wearer’s skin. In the present invention as claimed, a material for forming such a layer is chosen to provide such a selectivity in the skin-protective ingredient containing

layer. Formation of the skin-protective ingredient containing layer of such a particular selected material is not taught nor is it suggested by the *Brecher* patent. In view of the foregoing, Applicant respectfully asserts that amended independent claim 1 and newly added independent claims 8, 9 and 10 are patentable over the *Brecher* reference.

U.S. Patent No. 6,160,200 to *Ehrnsperfer* et al. discloses an absorbent article having a first waist region, an opposed second waist region, a crotch region disposed between the first waist region and the second waist region (see *Abs.*).

With respect to the material forming the skin-protective ingredient containing layer as claimed, the following is stated on page 3, paragraph 7 of the Office Action:

“Ehrnsperfer discloses a water soluble layer that is a body contacting layer of a diaper is polyvinyl alcohol. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the water soluble material of Brecher, be the polyvinyl alcohol of Ehrnsperfer, in order to promote increased strength, breathability, opacity and rate of dissolution.”

However, in col. 11, lines 38-44 the *Ehrnsperfer* patent contains the language “polyvinylalcohol, cellulosic materials, starches, polyvinylaniline, polyacrylamide, aglinates, water soluble alkyd compositions, and derivatives thereof. Some examples of suitable polyvinylalcohol films are available from Hoechst AG, of Frankfurt, Germany, under the trade names ‘ALCAM’ and ‘AQUAFILM’ as suitable water soluble materials.” Nevertheless, *Ehrnsperfer* fails to teach or suggest any particular material that provides the selectivity as required and claimed in the present invention.

As further set forth on page 3, the statement is made that “*Brecher* does not disclose that the skin protective ingredient is formed of a compound capable of forming an oily film on the skin of the wearer.” In this regard, reliance is made on *Schulte* et al. to cure the deficiency, contending that this patent discloses “the use of a skin care composition that is placed on the topsheet of an absorbent article so that during use a [portion] of the composition will be transferred to the skin of a wearer, and the composition is in a variety of forms such as powders, lotions, creams or ointments, and lotions creams or ointments are fully capable of forming an oily film on the skin of the wearer.”

U.S. Patent No. 6,166,285 to *Schulte* et al. relates to an absorbent article, such as a diaper, containing cuffs with a skin care composition disposed thereon. According to this patent, the skin care composition disposed on the cuffs is transferable to the wearer's skin by normal contact and/or wearer motion and/or body heat (see *Abs.*). However, once again, Applicant wishes to point out that even in view of the combination of *Brecher* and *Schulte* et al., the particular material providing the selectivity for the support layer as set forth and claimed is neither taught or suggested by these two references in combination with the *Ehrnsperfer* reference. In view of the foregoing, Applicant maintains that independent claim 1 as amended, as well as newly added independent claims 8, 9 and 10 are patentable over the cited references.


Based on the patentability of independent claims 1, 8, 9, and 10, for the reasons above, dependent claims 2-7, and newly added dependent claim 11 are also patentable over the prior art.

In light of the foregoing amendments and remarks, this application should be in condition for allowance. Early passage of this case to issue is respectfully requested. However, if there are any

questions regarding this amendment, or the application in general, a telephone call to the undersigned would be appreciated since this would expedite the prosecution of the application for all concerned.

Respectfully submitted,

Date: January 16, 2003

A handwritten signature in black ink, appearing to read 'A.A. Collins', written over a horizontal line.

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Date 1/16/03 Label No. EV 251496955-US

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PATENT TRADEMARK OFFICE

Docket No.: 2309/01158

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Takayuki HISANAKA

Serial No.: 09/761,511

Art Unit: 3761

Filed: January 16, 2001

Confirmation No.: 5640

For: ABSORBENT ARTICLE CONTAINING SKIN-PROTECTIVE INGREDIENT

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MARK-UP FOR AMENDMENT OF JANUARY 16, 2003  
PURSUANT TO 37 C.F.R. §1.121

**Box Fee**

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

IN THE CLAIMS:

1. (Thrice Amended) An absorbent article comprising:

a main body including a liquid-pervious top sheet, a back sheet and an absorbent

core sandwiched between the top sheet and the back sheet;

a layer containing a skin-protective ingredient for forming an oily film on skin of a wearer; and

a support layer for covering [the] said layer containing [the] said skin-protective ingredient, and [the] said support layer being provided on a surface of [the] said main body [to be in contact with] for contacting the skin of [a] the wearer, wherein;

the solubility in water of [the] said support layer is promoted at 25°C or higher, and/or the moisture absorbability or the solubility in water of [the] said support layer is promoted at a relative humidity of at least 30 %.

3. (Thrice Amended) The absorbent article as set forth in claim 1,

wherein the layer containing the skin-protective ingredient is formed of a compound capable of forming [an] said oily film on the skin of the wearer.

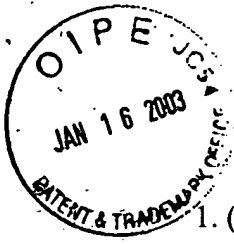
Respectfully submitted,

Date: January 16, 2003



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## COMPLETE SET OF PENDING CLAIMS

1. (Thrice Amended) An absorbent article comprising:

a main body including a liquid-pervious top sheet, a back sheet and an absorbent core sandwiched between the top sheet and the back sheet;

a layer containing a skin-protective ingredient for forming an oily film on skin of a wearer; and

a support layer for covering said layer containing said skin-protective ingredient, and said support layer being provided on a surface of said main body for contacting the skin of the wearer, wherein;

the solubility in water of said support layer is promoted at 25°C or higher, and/or the moisture absorbability or the solubility in water of said support layer is promoted at a relative humidity of at least 30 %.

2. The absorbent article as set forth in claim 1,

wherein the support layer is formed of at least one compound selected from the group consisting of polyethylene oxide having a molecular weight of from 100 to 500,000, polypropylene glycol having a molecular weight of from 100 to 10,000, and polyvinyl alcohol having a degree of polymerization of from 300 to 4000 and a degree of saponification of from 50 to 99.



3. (Thrice Amended) The absorbent article as set forth in claim 1,

wherein the layer containing the skin-protective ingredient is formed of a compound capable of forming said oily film on the skin of the wearer.

4. (Amended) The absorbent article as set forth in claim 3,

wherein the layer containing the skin-protective ingredient can be fluidized at 35°C or higher.

5. (Twice Amended) The absorbent article as set forth in claim 3,

wherein the layer containing the skin-protective ingredient is formed of at least one compound selected from the group consisting of liquid polyisoprene, squalane, pristane, ozocerite, ceresine, microcrystalline wax, polyethylene powder, liquid paraffin, petroleum jelly, and paraffin.

6. (Amended) The absorbent article as set forth in claim 1,

wherein the layer containing the skin-protective ingredient and the support layer are located on a surface of the top sheet.

7. (Twice Amended) The absorbent article as set forth in claim 1,

which further includes at least one of a leak-preventive cuff for preventing side leakage and a leg cuff for preventing leakage through the area around the wearer's thighs, and at least one of the leak-preventive cuff and the leg cuff are located between the top sheet and the layer containing the skin-protective ingredient and the support layer.

8. (New) An absorbent article comprising:

a main body including a liquid-pervious top sheet, a back sheet and an absorbent core sandwiched between the top sheet and the back sheet;

a skin-protective ingredient containing layer containing a skin-protective ingredient for forming an oily film on skin of a wearer, said skin-protective ingredient containing layer being in a liquified state at 35 °C or higher; and

a support layer for covering said skin-protective ingredient containing layer, and said support layer being provided on a surface of said main body for contacting the skin of the wearer, wherein;

the solubility in water of said support layer is promoted at 25 °C or higher, and/or the moisture absorbability or the solubility in water of said support layer is promoted at a relative humidity of at least 30%.

9. (New) An absorbent article comprising:

a main body including a liquid-pervious top sheet, a back sheet and an absorbent core sandwiched between the top sheet and the back sheet;

a skin-protective ingredient containing layer containing a skin-protective ingredient for forming an oily film on skin of a wearer; and

a support layer for covering said skin-protective ingredient containing layer and placed on a surface of said main body for contacting the skin of the wearer, said support layer being formed of at least one compound selected from among a group consisting of polyethylene oxide having a molecular weight of from 100 to 500,000, polypropylene glycol having a molecular weight of from 100 to 10,000, and polyvinyl alcohol having a degree of polymerization of from 300 to 4000 and a degree of saponification of from 50 to 99 for providing water solubility at a temperature higher than or equal to 25 °C and for enhancement of moisture absorbability or the solubility in water at a relative humidity of at least 30%.

10. (New) An absorbent article comprising:

a main body including a liquid-pervious top sheet, a back sheet and an absorbent core sandwiched between the top sheet and the back sheet;

a skin-protective ingredient containing layer containing a skin-protective ingredient for forming an oily film on skin of a wearer, said skin-protective ingredient containing layer being in a liquified state at 35 °C or higher; and

a support layer for covering said skin-protective ingredient containing layer and placed on a surface of said main body to be in contact with skin of the wearer said support layer being formed of at least one compound selected from among a group consisting of polyethylene oxide having a molecular weight of from 100 to 500,000, polypropylene glycol having a molecular weight of from 100 to 10,000, and polyvinyl alcohol having a degree of polymerization of from 300 to 4000 and a degree of saponification of from 50 to 99 for providing water solubility at a temperature higher than or equal to 25 °C and for enhancement of moisture absorbability or the solubility in water at a relative humidity of at least 30 %.

11. (New) The absorbent article as set forth in claim 1, wherein the support layer is formed of at least one compound selected from the group consisting of polyethylene oxide having a molecular weight of from 100 to 500,000, and polypropylene glycol having a molecular weight of from 100 to 10,000.